

# M E D I C A R E

## **STRATEGIES FOR REINING IN MEDICARE SPENDING THROUGH DELIVERY SYSTEM REFORMS: ASSESSING THE EVIDENCE AND OPPORTUNITIES**

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## **EXECUTIVE SUMMARY**

The rapid growth of health care spending in general, and Medicare spending in particular, poses a serious threat to the nation's economic health. The most recent projections show that the Medicare Hospital Insurance (Part A) Trust Fund will be depleted in 2017 unless actions are taken to slow the rate of cost increases, raise revenues, or both. To address concerns about the growth in Medicare spending, numerous solutions have been proposed, including reductions in provider payment updates, increases in premiums and cost sharing, and reforms that are designed to improve both quality of care and efficiency in the overall health care system. This paper looks beyond savings that could be achieved through reductions in provider payments to focus on some of the broader approaches to delivery system reform, considering the hard evidence that has accumulated thus far and lessons learned from Medicare demonstrations and other real-world studies. This paper assesses the extent to which proposed reforms are likely to achieve savings in the short or long term and change providers' practices in ways that both reduce beneficiaries' need for expensive services and reduce unnecessary procedures and inefficiencies.

Of the many ideas currently being proposed to reduce Medicare costs, the most popular (aside from simply cutting the growth in provider payments) include medical homes, electronic health records (EHRs), bundling of payments for episodes of care, accountable health organizations, and comparative effectiveness research. Each of these ideas has merit and presents opportunities for savings over the long term. The pending House of Representatives bill (H.R. 3200, America's Affordable Health Choices Act of 2009) includes provisions for pilot programs to test accountable health organizations and bundling of payments, as well as the establishment of a Center for Comparative Effectiveness Research. However, the Congressional Budget Office (CBO) ascribes little or no savings to any of these provisions of H.R. 3200 over the next ten years, and in all likelihood, these proposals are likely to require more than ten years to generate significant savings, although they could have a sizeable impact over the longer term. The rationale behind these proposals and the reasons they are unlikely to reduce costs significantly in the next five or ten years include the following:

- Medical homes have great potential to improve the coordination of care by having medical practices serve as the case manager for the patient, not simply the provider of treatment. Some recent evidence from a small pilot test of the Guided Care model developed by Chad Boulton, which may serve as a model for the medical home, suggests that such models could be effective in reducing hospitalizations and Medicare expenditures. However, the Medicare medical homes demonstration program, as currently designed, is not likely to achieve near-term savings because it targets too broad a range of patients, and dilutes focus on those individuals most in need of a medical home. Also, small practices (for example, those with fewer than five physicians) are

unlikely to have enough Medicare patients to support the additional staff required to be an effective, fully integrated medical home; this is a concern because more than half of all Medicare beneficiaries are served by practices with only one or two physicians.

- Electronic health records could achieve long-term savings by reducing errors and redundant testing, but will not be widespread for years. In physician practices and other medical settings where they are implemented, the savings are unlikely to fully offset the substantial startup cost for a number of years.
- Bundling of payments has the potential to reduce costs associated with unnecessary hospital readmissions and post-acute care, but may be difficult to implement given the ambiguities and tensions regarding what services are to be bundled together, which providers (hospitals, skilled nursing facilities (SNFs), home health agencies, specialists, and other physicians) will share in the bundled payment for a particular patient, and how payments are to be distributed among them.
- Accountable health organizations (AHOs) are appealing because they offer the potential to give hospitals and physicians financial incentives to work together to provide care efficiently by providing a global budget that they would have to operate within based on the number and health conditions of their patients. AHOs are most likely to be successful in situations where physicians are salaried, such as Mayo Clinic, Kaiser Permanente, or the Geisinger Clinic. Establishing such organizations would require a seismic change in the delivery system, however, and shifting physicians into such arrangements nationwide would be logistically, politically, and legally challenging, if not impossible.
- Comparative effectiveness studies could provide valuable information in guiding treatment decisions toward the most effective products, procedures, and tests. However, results of these studies are unlikely to produce savings unless Medicare takes them into account when making coverage determinations or beneficiaries incur higher out-of-pocket costs for non-optimal treatments. Rigorous designs, which may take longer to implement than cruder approaches, are essential for such analyses to avoid potential misinformation.

Despite this relatively bleak assessment for savings in the near term from some current popular proposals, there are two promising types of interventions for which there *is* solid evidence already available that they could generate such savings. In addition, another intervention for which no such rigorous evidence yet exists warrants special attention because of its enormous potential for addressing a root cause of much of the inefficiency in Medicare. The two most promising areas for reducing Medicare costs in the near term, based on hard evidence, are efforts to ***reduce the need for hospitalizations*** among beneficiaries with the most serious chronic illnesses and models to ***reduce hospital readmissions rates***. The intervention with the potential to generate even larger savings is ***reducing disparities across physicians and geographic areas in care delivery, utilization, and expenditures***. Attempts to accomplish such reductions within health plans or clinics have met with limited success to date, so this suggestion lacks the hard evidence to support it that the other two approaches have. Nonetheless, the rapid response of

hospitals to DRGs (diagnosis-related groups) as part of Medicare’s hospital prospective payment system shows that providers can respond rapidly to strong financial incentives. Furthermore, the potential to link payments to efficient performance suggests that this as-yet-unproven approach could result in major savings if providers are only paid for efficient levels of care.

**New evidence from the Medicare Coordinated Care demonstration offers the promise of net Medicare savings, and the potential for reducing hospitalizations, for a well-defined population and a well-designed intervention.** Beneficiaries with congestive heart failure, coronary artery disease, or chronic obstructive pulmonary disease who were hospitalized in the past year, or individuals with any chronic illness and multiple hospitalizations in the past two years can benefit from nurse-led coordination interventions. Interventions with well-designed features that are targeted towards these beneficiaries can reduce hospitalizations by nine percent to 24 percent. This population encompasses 18 percent of all Medicare beneficiaries, and accounts for 38 percent of all Medicare expenditures in the year after they meet the eligibility criteria (and one-third of all Medicare costs for the next three years); this intervention could generate net savings of \$30 billion or more over 10 years.<sup>1</sup>

**Rigorous, published studies show that hospital readmissions can be reduced substantially if a detailed protocol for transitional care is followed.** Both Mary Naylor and Eric Coleman have shown in multiple studies that their transitional care interventions substantially and significantly reduce the high short-term re-hospitalization rate (20 percent) for Medicare patients. The two interventions differ in their approaches; Coleman focuses on coaching patients and families to self-manage, while Naylor takes a nurse-directed approach. Both, however, have proven to be successful; Coleman reduced hospital costs by 19 percent for patients with a range of chronic illnesses over a six-month follow-up period, and Naylor reduced the number of hospital re-admissions by 34 percent and total Medicare expenditures by 39 percent for CHF patients over a 12-month follow-up period.

**Reducing geographic disparities has a much larger *potential* payoff than the proven interventions—researchers have shown that reducing Medicare spending in all areas to that of the most efficient areas would reduce total Medicare spending by 30 percent.**<sup>2</sup> While no policy to induce these reductions nationally has been tested, and evidence from previous studies on reducing such practice differences within health plans is mixed,<sup>3</sup> the Centers for Medicare & Medicaid Services (CMS) has put the infrastructure in place that could make it possible to do so. CMS’s Resource Use Reporting (RUR) project is piloting a methodology to provide Medicare physicians with reports that compare the Medicare resources used for their own patients to those expended for similar patients of other physicians locally and nationally, adjusted for differences in patient case mix and prices. This project will, for the first time, show physicians how their own prescribed care and referral patterns compare to others. If payment changes are made that reward only efficient levels of care, the savings could be significant. Furthermore, this approach could work within the current structure in which most physicians are not salaried employees of large systems such as Kaiser or Geisinger.

The following list outlines several steps that could be taken to reduce the growth in Medicare spending in the next five to ten years. The list starts with suggestions based on strong evidence that has been generated from the Medicare Coordinated Care demonstrations and the

Naylor/Coleman studies, then moves on to include: (1) the potential for achieving savings from reductions in wide variations in provider practices, (2) a model for ensuring that the search for effectiveness will be an ongoing effort, (3) reaping savings in the Medicare Advantage program, where the incentives and structure to foster efficient health care delivery are already in place, and (4) building the infrastructure for savings in future decades. Each suggestion is based on giving providers and patients more information about what constitutes better and more efficient care, and establishing incentives for providers to practice more efficiently.

***Build on Demonstrated Success of Models that Achieve Savings Through Care Coordination and Reductions in Hospitalizations and Readmissions***

- Implement a large, broad-based coordinated care pilot to test whether other organizations can achieve the same success as the effective demonstration sites, using the intervention protocols those sites have followed and refined over the past seven years. Use the findings from the pilot to establish a permanent care coordination benefit under Medicare for providers who can and will implement these proven protocols.
- Modify the Medicare “medical home” demonstration so that it is targeted to only the subset of beneficiaries most likely to benefit from care coordination (that is, those identified in the Coordinated Care Demonstration noted above for beneficiaries with chronic illnesses). Require that medical homes incorporate the lessons learned from the demonstration on how to implement an effective care coordination intervention and lessons from the literature about effective transitional care and patient self-management education.
- Vary the base rate paid to hospitals for Medicare admissions to reward those with low case-mix adjusted readmission rates and penalize those with high case mix-adjusted readmission rates. (H.R. 3200 includes a similar provision; CBO estimates that this would generate savings of \$19 billion over the next 10 years.) Provide guidance to hospitals on how to achieve lower readmission rates, by feeding back data analyses to diagnose the major sources of the high rates, as well as referring the hospitals to experts who have developed and tested effective transitional care interventions.

***Use the Infrastructure Developed for Comparing Provider Efficiency to Educate and Motivate Physicians***

- Refine and extend the RUR program. Include quality of care indicators that have clear and near-term cost implications. Publicize the aggregate findings annually to show differences in levels and trends across and within geographic areas. Develop and publicize plans to base physician payments on their efficiency and quality measures. After two years of dissemination and refinement, tie physician payments to their RUR ratings and quality of care.

***Establish an Environment that Stimulates an Ongoing Search for Greater Efficiency***

- Maintain an ongoing “learning laboratory” of care coordination programs to conduct rapid turnaround testing of variations in the proven interventions to increase the impacts on hospitalizations or lower the cost of the effective care coordination interventions.

- Publicize “best practices” and lessons learned at regular intervals in a visible, timely, and accessible forum, so that ongoing learning and improvement occurs at all levels.
- Conduct rigorous studies wherever possible to compare the relative effectiveness of alternative interventions that vary substantially in their costs. Use large enough samples where possible to examine subgroups of patients and assess variations in what works best for different types of individuals.
- Continue to seek ways to improve end-of-life care to maximize the comfort and quality of life in those last months for terminally ill patients and their families, while limiting the use of expensive procedures and treatments that have no potential to meaningfully increase survival time or quality of life.

***Reinstate Incentives for Efficient Provision of Care in the Medicare Advantage (MA) Program***

- Capture savings from managed care’s potential efficiencies by forcing real and fair competition with traditional fee-for-service Medicare. Initially designed to reform incentives in the health care system to achieve greater efficiencies and improve patient care at a lower cost to the Medicare program, Medicare now overpays private plans under the Medicare Advantage plan by an estimated 14 percent, on average. Short-term savings could be achieved by reducing Medicare Advantage plans’ capitation payments to 98 percent of what beneficiaries would be expected to cost had they been in Medicare’s traditional fee-for-service (FFS) arrangement, thus returning the Medicare Advantage program to its conceptual origins as a strategy to promote better and more efficiently managed care. (H.R. 3200 would phase down payments to 100 percent of expected FFS expenditures to achieve savings of \$156 billion over ten years.)

***Build the Infrastructure Needed for Longer Term Improvements in Efficiency and Quality***

- Continue to move forward with electronic health records development, building on findings from the Medicare demonstrations.

Policymakers have strong interest in reducing the rate of growth in health care spending and in using Medicare to lead the way in delivery system reform. They now have the opportunity to adopt reforms that are likely to achieve savings in the relatively near term by reducing costs for the highest-risk beneficiaries, giving hospitals financial incentives to lower their readmission rates, and by giving physicians specific information about their performance and tying reimbursement rates to the efficiency of their practices. While there is no guarantee that interventions and programs found to be successful in demonstrations or small experiments will be equally successful when implemented more broadly, the evidence that the changes suggested above will begin to bend the cost curve within the next five to ten years is stronger than for any of the other proposals under consideration. Controlling health care costs over the longer term will require ongoing efforts to develop, test, and implement new strategies that are proven to improve both the efficiency and the quality of care.

## **STRATEGIES FOR REINING IN MEDICARE SPENDING THROUGH DELIVERY SYSTEM REFORMS: ASSESSING THE EVIDENCE AND OPPORTUNITIES**

As President Obama has made clear, reducing the rate of increase in medical spending is critical to the nation's economic health and to the ability to provide coverage to all Americans. Any effort to bring costs under control must involve the Medicare program, given that it accounts for a large share of the federal budget, and that Medicare policy exerts a strong influence on the health care sector in general. Thus, reducing the rate of increase in per beneficiary Medicare expenditures is critical. The focus of this paper is on how best to do that through delivery system reforms, and how to achieve some savings as quickly as possible.

The most recent projections show that the Medicare Hospital Insurance Trust Fund will have insufficient funds to pay full benefits beginning in 2017 unless something is done to slow the rate of cost increases. Looking into the future, it will be critical to slow the growth in spending per person as the number of beneficiaries grows. The challenge will be to identify policies and programmatic changes that will achieve the promise of moderating costs. Numerous solutions have been proposed, including reductions in provider payment updates, increases in premiums and cost sharing, and reforms that are designed to improve both quality of care and efficiency in the overall health care system. This paper looks beyond savings through payment updates to focus on some of the broader approaches to delivery system reform, considering the hard evidence that has accumulated thus far and lessons learned from Medicare demonstrations and other real-world studies.

Despite claims to the contrary, it is exceedingly difficult to identify interventions and policy changes that reform practice patterns and actually reduce costs. Reducing costs by cutting the growth in Medicare payment rates can achieve savings and put needed pressure on providers to encourage greater efficiency; however, this can be politically difficult, as witnessed by Congress's annual overrides of the legislatively-mandated reduction in payment rates for physician services to offset volume increases. Other reforms can be successful, but are not always easy to replicate without eroding savings or diminishing the intervention's ability to achieve its full potential savings. Furthermore, policy changes that constrain choices, increase out-of-pocket costs for consumers, or reduce revenue for specific providers could engender a political backlash that could inhibit cost control efforts.

Consider first one of the success stories, which illustrates the power of properly targeted financial incentives applied in a relatively straightforward manner. When hospitals were paid on a per diem basis (prior to 1983), Medicare stays averaged about 10 days per admission, declining gradually by an average of 0.26 days per year over the 16 years from 1967 to 1983. In the first full year that Medicare payment to hospitals was set at a fixed (risk-adjusted) amount per admission (the prospective payment system, or PPS), average length of stay declined by more than a full day, from 9.7 days in 1983 to 8.6 days in 1984.<sup>4</sup> Since that change, lengths of stay have continued to decline, but at a slower rate (0.15 days per year), to 5.9 days per stay in 2002. The remarkable one-year decline when PPS was first introduced was achieved despite the rapidly growing substitution of outpatient surgeries for inpatient stays, which removed some of the

shorter stays from the calculation of the inpatient mean. As a consequence, Medicare saved money as it ratcheted down the base payment rate for a hospital stay over time. Meanwhile, the proportion of beneficiaries admitted to a hospital in a year has stayed remarkably constant, at about 20 percent. While the rapid decline in length of stay raised concerns that patients were being prematurely discharged, resulting in poorer outcomes and higher hidden costs due to readmissions, research found no concurrent problems with increasing complications or readmissions.

Contrast this experience with that of introducing private managed care plans, such as health maintenance organizations (HMOs), to Medicare (the program now called Medicare Advantage). The concept sounded promising—give a fixed monthly payment per member to plans that have control over which physicians and hospitals their members can use and what (and how) they pay these providers for services, and let the plans decide how to deliver services efficiently to maximize their profits, as they do with their commercial clients. Payments were set at 95 percent of the actuarial projections of costs for beneficiaries of comparable age, sex, and institutional status so that the Centers for Medicare & Medicaid Services (CMS) would reap some of the cost savings from the plans' more efficient production of health care. Beneficiaries joined HMOs, despite some loss of control over their provider selection, because some of the plan's savings were passed back to them in the form of lower premiums than the beneficiary would have to pay for Medicare supplemental coverage (Medigap) and/or more extensive coverage than under traditional Medicare (such as coverage of prescription drugs prior to the introduction of Part D, eyeglasses or dental care, or elimination of deductibles). Unfortunately, what could have been a cost-saving innovation actually increased total Medicare spending, because the HMOs attracted a healthier mix of enrollees than average, which the crude risk adjustment strategy used in the 1980s and 1990s did not adequately control for. Congress took over a decade to phase in a more accurate risk adjuster, despite repeated evidence showing this favorable selection was resulting in overpayments to HMOs rather than savings to Medicare.<sup>5</sup> In addition, over the past 8 years Congress legislated substantially higher payments to HMOs and other Medicare Advantage plans than Medicare would have incurred had the beneficiaries remained in traditional fee-for-service (FFS) Medicare.

It is obviously important to proceed with policies based on strong evidence that a new intervention will be effective in achieving savings—and doesn't cost more than it saves—before implementing a new nationwide strategy. To its credit, CMS did exactly that with commercial disease management programs, investing in demonstrations that ultimately showed the flaws and ineffectiveness of these models while holding the programs at financial risk for generating the savings required to cover their fees.<sup>6</sup> CMS also tested a telemedicine program for diabetics that produced some modest improvements in clinical quality-of-care indicators, but at a great cost and without reductions in hospitalizations.<sup>7</sup> These demonstrations ultimately saved millions of dollars by helping CMS decide *not* to implement expensive but ineffective approaches that had been touted as generating enormous savings and were widely used in commercial settings.

The current risk is that in responding to the urgent call for cost-saving reforms, policymakers will adopt well-intended but unproven methods of reducing healthcare costs. To put Medicare on a more solid footing, policymakers could focus on two types of changes in the near future: (1) those with the greatest likelihood of producing meaningful savings in the near term (the next

three to five years), and (2) those that will create the foundation over the next few years for lowering the growth rate of costs further into the future. The discussion below first describes why many of the most talked-about current ideas are unlikely to reduce costs in the near term, then assesses the best short-run savings opportunities, and concludes with suggestions for how to achieve these savings over both the short and long run.

## **What are the current popular ideas for generating cost savings for Medicare, and are they likely to achieve savings in the near term?**

Several ideas and models are currently being discussed to reduce health care costs in general and Medicare costs in particular, and are getting a significant amount of attention in recent health reform discussions. The pending House of Representatives bill, America's Affordable Health Choices Act of 2009 (H.R. 3200), for example, includes several provisions designed to generate savings and improve quality, including pilot programs to test Accountable Health Organizations, bundling of post-hospital care, and the establishment of a Center for Comparative Effectiveness Research. While all have promise, the Congressional Budget Office (CBO) scoring of H.R. 3200 ascribes little or no savings to any of these ideas over the next ten years. In all likelihood, these proposals will require more than ten years to generate significant savings, although they could have a sizable impact over the longer term.

**Medical homes.** The concept of medical homes is that (virtually) all Medicare beneficiaries would be connected to a physician practice that would be responsible for coordinating their care. CMS's demonstration of this concept is currently under review by the Office of Management and Budget. To cover the cost of this coordination effort, monthly capitation payments will be made to practices serving as medical homes for patients, with the amount of these payments for a given patient in a given practice falling into one of four categories. Assignment to categories depends on (1) whether the patient's projected future Medicare expenditures exceeds a pre-specified threshold (as determined by a risk score calculated from diagnoses for which the patient had been treated prior to enrollment), and (2) the comprehensiveness and sophistication of the practice's medical home features.

While the concept of medical homes is appealing because it promotes greater coordination of care, it is not without practical challenges:

- The medical home model is not designed for small practices: practices with one or two physicians would not typically have enough high-risk patients to support a full-time care coordinator.
- Medical homes are targeted too broadly to achieve savings that exceed costs. As currently designed, over 80 percent of a typical physician's Medicare patients would be included in the demonstration, but only about one-fourth of these patients will be at high risk of hospitalization in the next year or two, or in need of the type of coordination expected of a medical home. Thus, much of the monthly payments will be for patients who do not need the intervention, while the amount being considered for those who are high risk may not be adequate to provide the necessary services. By refocusing attention, and payment, on beneficiaries with chronic conditions, the program will have substantially greater likelihood of generating savings in the next few years that are large enough to offset program costs.

- The medical home demonstration design specifies a number of requirements, but the requirements do not indicate *how* effective care coordination would be implemented, and thus are not likely to produce the kinds of changes that lead to reductions in expensive hospital care. The discussion below on findings from the Coordinated Care demonstration illustrates the importance of implementation details in distinguishing effective from ineffective care coordination programs. The Guided Care model developed by Chad Boulton provides such details and has great promise for medical homes, but raises concerns about whether the cost of the multi-disciplinary team it engages in patient care will outweigh any savings generated (new evidence on this is emerging).<sup>8</sup>

***Electronic health records (EHRs).*** Virtually everyone believes that having electronic health records that are readily accessible to all physicians who treat a given patient would reduce medical errors and redundant testing and improve adherence to evidence-based medicine, resulting in lower costs. The records would contain information from all patient encounters with the medical system, and would include symptoms, test results, diagnoses, and prescribed medications and self-care regimens. Costs could be saved by avoiding redundant testing, minimizing the likelihood of harmful drug interactions or conflicting care regimens, recommending a course of treatment for a patient (based on their characteristics, symptoms, and history), and documenting the rationale for deviations from guidelines.

Electronic health records are badly needed, but it is widely believed that any favorable effect they may have on total health care costs will not be realized for many years. The experience Kaiser Permanente has had with its system supports this view<sup>9</sup>: while Kaiser Permanente experienced reductions of 25 percent and 21 percent, respectively, in the rate of primary care and specialty care office visits between 2004 and 2007 in their Hawaii region, emergency department visits rose by 11 percent over the same time period. Furthermore, savings from reductions in office visits are offset somewhat by an eight-fold increase in scheduled telephone visits, and a six-fold increase in secure email messaging, leading to an eight percent increase in the total number of ambulatory contacts. Additional time is required to document patient visits. Thus, while there may be some savings to Kaiser and improvement of quality of care attributable to electronic health records, the savings are not likely to be large enough to offset the large initial investment (\$4 billion) and maintenance costs for many years, if ever.<sup>10</sup>

***Bundling hospital and post-acute payments for episodes of care.*** This approach is designed to improve transitions from one care setting to another, primarily from an acute care hospital to a rehabilitation hospital, skilled nursing facility, or home health care. Furthermore, all providers would be involved in an episode focused on the goal of providing the whole package of services as efficiently as possible. This would be accomplished by providing a bundled payment for the episode of care to be divided up among the providers involved; the various actors would be responsible for splitting up the payment. H.R. 3200 contains provisions for bundling payments. Under this model, hospitals would receive an augmented pre-set amount per admission and would be responsible for all hospital and post-acute care provided by home health agencies, skilled nursing facilities, and rehabilitation hospitals and clinics during a fixed period of time after hospital discharge (for example, 30 days).

Bundling of payments appropriately refocuses incentives on providing more efficient care than on just providing more care, and provides incentives to look beyond individual silos in medical care. Nevertheless, this approach seems fraught with practical difficulties of implementation—who has the power in these arrangements? Will hospitals use their market power and greater resources to drive smaller post-acute providers out of business or take them over? Can the smaller payment amount that is to be divided be allocated in a fashion that is acceptable to all providers whose compensation is included in the bundled payment?

***Pay-for-performance.*** This popular payment reform model ties compensation to the quality rather than the quantity of care. As attractive as it sounds, however, it will not necessarily save money and may well increase costs, because the incentive is solely to improve quality of care, without regard to cost. Better quality *can* lead to lower costs, but does not necessarily do so, especially given the wide range of indicators used to assess what constitutes better quality. For example, some indicators focus on screening tests or preventive care, which are valuable for the patients' long-term health, but increases in these rates are more likely to increase spending than to lower it in the next ten years, or longer.

***Accountable health organizations (AHOs)/Accountable care organizations (ACOs).*** This approach merits special discussion, given the attention generated in policy circles by the widely read and cited New Yorker article by Dr. Atul Gawande.<sup>11</sup> The article suggests that community stakeholders—hospitals, medical groups, home health agencies, consumer groups, insurers, and others—should form a collaboration and be held jointly accountable for the performance of the local health care system. Elliot Fisher and colleagues at Dartmouth suggest that such organizations hold substantial promise for improving quality and lowering the cost of care. Under their model, the AHO would be led by a local hospital, which would receive a single capitation payment for each patient, and would be responsible for allocating the money across the physicians and other providers in a manner that yields the most efficient overall care. While providers would still receive fee-for-service payments for services, by having bonuses paid for efficiency the model reduces the incentive for providers to maximize the amount of services they render or to shift costs.<sup>12</sup>

As posed, the model appears to be much like an HMO, but without any real authority. Medicare Advantage plans (HMOs and PPOs) have generally shown themselves to be poor role models for efficiency or delivering higher quality than fee-for-service, despite the appeal of having one entity being responsible for delivery of the full range of health care services to a defined population of patients. Other forms of Medicare Advantage plans, such as private fee-for-service (PFFS) plans, are even less efficient.<sup>13</sup> Furthermore, the logistics of how such a system would or could work anywhere, except perhaps in a small community where physicians are salaried (and therefore have no financial incentive to overuse services), are unclear. As Fisher and colleagues note, there are significant cultural, legal, and practical obstacles to this model. Saving money will require reducing hospital use and unnecessary services provided by physicians; the pie has to shrink. Battle lines will quickly form on which provider's piece will take the biggest hit, and it is unclear who will wield the actual authority in making those decisions. The failure of HMOs to achieve similar promise should be a warning sign, and how accountable health organizations will avoid the same fate is unclear.

The most prominent example of accountable health organizations, the Community Care of North Carolina (CCNC) program, purports to generate large savings for the state's Medicaid program. However, studies showing such savings have not been published, and the documents available on the CCNC website that describe the methods provide far too little detail to assess the validity of the savings estimates, or their generalizability to the Medicare population (see Appendix A for a more detailed discussion of the CCNC evaluations). The CCNC program has a number of desirable features and may be a reasonable model to pursue in some parts of the country, and is relatively inexpensive. But there is little credible evidence of what savings would actually be achieved, if any. Furthermore, a recently released analysis of the data for CCNC estimates that the program actually increased costs by \$400 million in 2006, rather than reducing them by the \$300 million that year, as estimated by Mercer.<sup>14</sup> Thus, caution should be exercised before touting this model as a source of great savings.

***Comparative effectiveness research.*** Comparative effectiveness is a broad term that is used differently by different people, but in general means building an evidence base that would enable providers and insurers to determine the most efficacious and cost-effective treatments and medications. Some advocates of such research suggest that it could help providers identify which treatments are most likely to be successful for any given patient with particular characteristics, symptoms, or history, at any particular point in time.

Comparative effectiveness research will be extremely valuable in some situations, such as head-to-head tests of a new, expensive drug against an established lower-cost alternative for a particular illness or symptom. However, it is far more complex and limited than many of the claims that are being made for it. Even in this most straightforward of cases, clinical trials are needed to test the medications adequately for efficacy and safety. Use of registries to conduct the analyses would be fraught with severe selection bias problems, and would be of little value for determining the optimal medication for a particular patient, given the myriad of patient characteristics that could influence a drug's effectiveness. These problems would be far more serious for testing treatments other than drugs, because even more factors affect their likelihood of success.

Moreover, even if comparative effectiveness tests are conducted rigorously, legislative changes will be needed for them to have much impact. Current Medicare regulations require that any treatment shown to be effective cannot be denied to beneficiaries, regardless of cost. The prospect of limiting beneficiaries' access to particular treatments that are more costly than an alternative one that is equally effective *on average* has raised important concerns that people who are not responsive to the less expensive treatment or medication will not have access to alternative treatments that may be effective for them, or will have to pay much more out of pocket for such treatment. Physicians, lawmakers, and patient advocacy groups have expressed concerns about taking treatment decisions out of the hands of physicians and patients by denying Medicare payments. These concerns could be addressed by allowing exceptions when the most cost-efficient treatment is shown to be inefficient or contra-indicated for a particular patient.

## **Do any interventions offer potential savings in the next five to ten years?**

This somewhat discouraging assessment of the likelihood that the most prominent suggestions for saving money through system reforms will actually do so any time soon does not mean that there are no alternatives. The areas that seem to have the greatest potential for generating savings in the short run are *reducing the need for hospitalizations among beneficiaries with serious chronic conditions, reducing the hospital readmissions rate, and reducing the enormous disparities across physicians in resource use and costs of care*, which do not correlate at all with differences in quality of care.

Compelling evidence exists now on what interventions do or do not generate savings for high-risk patients by reducing their need for hospitalizations and for short-term readmissions. The studies also show to whom such programs should be targeted to achieve these savings in the very near term. There is also strong evidence that large disparities in efficiency exist between physicians, both within and among geographic areas, but there is little evidence on what interventions would be effective in changing those practices. Nonetheless, the potential savings are very large if physicians were paid only for an efficient level of care, and not for redundant or unnecessary services they provide. Solving each of these problems will require two factors: (1) giving *information* to providers (including physicians, hospitals, health plans, and care coordination programs) on what works, and (2) implementing payment changes that incorporate financial *incentives* for providers to adopt these more effective and cost-efficient practices. Reducing hospitalizations for the chronically ill will also require a new care coordination benefit that is tightly defined and targeted. The discussion below describes how these most promising areas might generate savings in the relatively near term.

### ***Reducing Hospitalizations and Readmissions for Beneficiaries with Chronic Illnesses***

The first area with major savings potential is in improving care for beneficiaries with chronic illnesses, specifically focusing on rates of hospitalization. A frequently cited statistic is that the five percent of patients with the highest costs account for 50 percent of all Medicare costs in a year. This estimate is dramatic but difficult to use in policy formulation, because the five percent subgroup of beneficiaries cannot be identified in advance. Furthermore, many of these patients in this top group received expensive but life-extending procedures like organ transplants or bypass surgery. Few, if any, policymakers would advocate eliminating coverage of such services to cut costs. Another measure indicating that patients treated for five or more chronic conditions in a given year account for 20 percent of Medicare beneficiaries but 65 percent of all Medicare costs is also somewhat misleading for guiding policy decisions, because it substantially overstates the share of costs that these beneficiaries will account for in future years.

It is possible, however, to identify (1) some important patient target groups based on their diagnoses and service use in one year who will account for a disproportionate share of costs in the next several years, and (2) interventions that have generated sizable reductions in their hospitalizations and costs in multiple settings. This group of beneficiaries represents the greatest target of opportunity for Medicare cost savings in the short run. The most promising interventions for which hard evidence (that is, randomized clinical trials) exists are patient self-management programs, certain coordinated care programs staffed by nurses, and transitional care programs.<sup>15</sup>

Kate Lorig and John Wheeler have both developed patient self-management programs, which train patients and their families to manage the patient's care, and to talk to their physicians effectively to get the information they need.<sup>16</sup> Their programs have not focused primarily on Medicare beneficiaries, but have shown sizeable reductions in hospitalizations and costs in randomized trials of adult patients with chronic illness. The programs provided weekly group sessions led by health educators over a four- to seven-week period. Topics included exercise, symptom management, fatigue and sleep management, use of medications, and problem solving.

While large-scale commercial disease management companies have been unsuccessful in reducing hospitalizations and costs for Medicare beneficiaries in the fee-for-service sector, several smaller, nurse-led local care coordination programs have been shown in 15 rigorous, long-running randomized trials to generate such savings for a group of high-risk, high-severity patients with chronic illnesses.<sup>17</sup> A study of this approach shows that four different types of organizations (an urban academic medical center, an integrated delivery system in a rural area, a hospice agency, and a quality improvement provider) each were able to reduce the number of hospitalizations for a high-risk group by nine percent to 24 percent over an average follow-up period of three years. The high-risk group, comprised of beneficiaries with heart disease or pulmonary disease and a hospitalization over the prior 12 months, plus beneficiaries with any of 12 chronic illnesses and two or more hospitalizations in the previous two years, includes about 18 percent of all Medicare beneficiaries. This group, when identified from claims data for a given calendar year, accounts for over one-third of all Medicare spending over the three subsequent calendar years.

The findings from the 15 coordinated care demonstrations demonstrate the importance of appropriate targeting and enable policymakers to identify some operational features that distinguish the eight programs that were unable to reduce hospitalizations from the four that succeeded (the other three programs enrolled too few patients to evaluate). The reduced hospitalization reductions in the effective programs were driven by the programs' success with patients who had high-risk and high-severity conditions, as evidenced by a relatively recent hospitalization or repeated hospitalizations, as described above. Features of the successful programs that differentiated them from the less successful ones include:

- They developed a strong rapport with patients through frequent (approximately once every four to six weeks) *in-person* contact with the patients, in addition to telephone contacts.
- They developed a strong working relationship and trust with the patients' primary care physicians, either through being co-located with them, having a prior working relationship with them, attending some of the patient's visits to the physician, seeing the physician during hospital rounds, or other ways of having informal face-to-face contact with the physician. In addition, successful programs tended to try to assign the same care coordinator to all of a physician's patients who were in the program.
- They had timely information on hospitalizations and emergency room visits, enabling them to provide extra attention to patients at a time of crisis in their health care. This attention could help patients reduce their likelihood of being readmitted by educating them about how to take their medications and follow physicians' recommendations

for post-discharge activities and self-care, helping them make and keep follow-up visits in the weeks after discharge, and helping them understand how their own behavior may have contributed to their need for the hospitalization and how to avoid such problems in the future.

- They had strong medication management interventions that monitored patients for adverse reactions to their medications, checked for redundant or conflicting prescriptions, and tracked patients' filling of prescriptions to ensure they were renewed on a timely basis.
- They had strong self-care education programs, focused on helping patients' identify early warning signs and know when to call their physician, understand how to take their medications and adhere to their other self-care regimens, and overcome barriers to adherence.
- They provided social support services to patients who needed them, when they needed them. These services included not only transportation assistance and meals, but also help in identifying and dealing with depression and isolation.
- They served as a communications hub between patients and providers. In practice, this typically meant making sure that a patient's numerous physicians all had a complete list of the patient's medications and any changes made, providing hospital staff with relevant patient information upon admission, serving as a liaison between hospital discharge planners and the patient, and making sure that tests recommended by evidence-based guidelines were ordered on schedule and that providers had the results when they saw the patient.

To address the problem of short-term hospital readmissions, Mary Naylor and Eric Coleman have both developed highly effective, proven programs that use advance practice nurses to help hospitalized Medicare patients reduce their probability of readmission. This is a major source of potential savings for Medicare, since 20 percent of all Medicare beneficiaries discharged from a hospital are readmitted within 30 days, often for problems that could have been prevented with adequate post-discharge care, coaching, and monitoring of the patient.<sup>18</sup> Naylor's approach, used for congestive heart failure (CHF) patients, is a highly protocol-driven, nurse-directed approach, with the intervention occurring over a three-month period following discharge.<sup>19</sup> Coleman's approach, which has been used primarily in managed care settings, relies on coaching patients and their families during the 30 days after discharge in how to manage their own post-acute care.<sup>20</sup>

H.R. 3200 contains a measure related to reducing hospital readmissions, but does not reward hospitals with low readmission rates, is limited to readmissions only after hospitalizations for one of only three selected diagnoses (until 2017, when it increases to seven conditions), and the reduction in the base rate is limited to one percent in 2012, two percent in 2013, and tops out at five percent in 2015 and thereafter. The payment reduction factor is equal to the ratio of payments for "excess" readmissions (the amount in excess of what will be predicted from a model, based on their patients' characteristics), divided by total payments for Medicare hospitalizations. This provision seems more limited than necessary and greatly restricts the potential savings, and also does not encourage hospitals that would not experience a penalty to reduce their readmissions. The payment reduction should vary with the readmission rate and be set such that a hospital that reduces its readmission rate below a target rate

(e.g., below the median) would not suffer any loss in Medicare revenue relative to being at the target rate, whereas hospitals that were above the target rate have a payment-rate reduction that ensures that they receive no more total revenue than if their patients had readmission rates equal to the median rate. The median and the target rate should consistently decline over time until reaching a level that represents highly efficient care. Thus, hospitals with low readmission rates have an incentive to continue finding ways to reduce preventable readmissions, while hospitals with high readmission rates do not profit from this behavior.

### ***Reducing Regional Disparities Across Physicians and Areas in Efficiency and Quality***

The Dartmouth group, led by John Wennberg and others, has shown repeatedly that costs are far higher in some areas than others, with no corresponding increase in quality for the added resources (and sometimes *poorer* quality).<sup>21</sup> Furthermore, as the recent Gawande article points out, most physicians have little or no awareness of how their practice patterns differ from their peers. If physicians are shown how their care differs from that provided by the most efficient physicians on the use of inpatient versus outpatient treatment for specific diagnoses and procedures, use of specialists, use of home health care, use of high-cost procedures and tests, and other actionable factors, physicians could begin to understand *how* they might change their prescribing and treatment practices without harming their patients.

Some physicians, however, deliberately practice in ways that are inefficient because it is financially beneficial to them to do so. Excessive use of MRIs and other imaging devices they own, referral arrangements with specialists, pressure from hospitals where they have admitting privileges to admit patients when outpatient care would suffice, performing more lucrative treatment options, (e.g., implanting stents instead of trying pharmaceutical solutions), and other treatment choices made by physicians may increase their income but have little or no beneficial effect for their patients over less costly treatment options. For these physicians, simply knowing that their practice patterns are more costly than those of other physicians for similar patients is not likely to change their behavior. Thus, Medicare needs to pay physicians according to how close they are to that high efficiency standard, so that all physicians have an *incentive* to change. If improved tools, such as electronic health records and software that suggests evidence-based treatment, accompany this incentive, substantial improvements in efficacy could be achieved.

One of the largest and most promising efforts to lay the groundwork for reducing inter- and intra-geographic area differences in efficiency is CMS's Resource Use Reporting (RUR) project, under which all Medicare physicians in the country will receive a report showing how the costs of their own Medicare patients per episode of care for particular chronic illnesses compare to that of other physicians in their market area, their state, and nationally. The cost estimates are risk adjusted for differences in patient severity levels. This project will give physicians their first glimpse of how they perform relative to their peers, both locally and nationally. The current effort is a reporting exercise to inform physicians of the disparities.

A pilot study for a limited set of physicians is currently in progress to test the reliability, validity, stability, and acceptability of these efficiency and quality measures. Once CMS has sufficient confidence in the measures, it will consider calculating and providing to each physician his or her efficiency ratings and quality of care measures. Each physician will receive a report showing

the average Medicare expenditures for their patients with selected conditions, and their relative efficiency in percentile terms. The reports show comparisons not only on total costs (using standardized prices to account for inter- and intra-area variations in unit costs), but on use of particular services, including hospitalizations and hospital days, skilled nursing facilities, home health care, emergency rooms, and other services, including imaging and durable medical equipment. CMS's tentative schedule calls for an expanded pilot test including up to 80,000 physicians in July 2010. No timetable has yet been set for generating these estimates for all Medicare physicians, but it appears to be feasible to do by 2012.

The methodology is not perfect—physicians and researchers have concerns about rules for attributing episodes to a particular provider, how to allocate episode costs across multiple physicians who treat the patient during an episode, the adequacy of the risk adjuster, and what constitutes an episode of care. Nonetheless, this effort provides the first systematic attempt to capture the variation across individual physicians and distribute the information to physicians. The tools to measure these efficiency differences can be refined over time.

The motivation for this RUR project is the hope that this information will lead physicians to re-examine their practice patterns (referrals, use of hospitals, use of expensive testing) and that high-utilizing outliers will begin to conform more to the norm. However, given the financial incentives currently in place for physicians to practice inefficiently, CMS may wish to use this methodology not only for reporting to physicians about their practice patterns but also for setting payments to physicians. The evidence is weak that simply providing the information will compel physicians to change their practice patterns.<sup>22</sup> Thus, for the program to be effective payment mechanisms and financial incentives will be needed to ensure that providers either change their practices in ways that conserve resources while maintaining or improving quality, or that they are reimbursed only the amount that an efficient provider would have been paid, regardless of the excess services they provide or order.

The “pay-for-efficiency” approach suggested here differs importantly from the typical pay-for-performance approaches, which focus on reducing variation in the *quality* of care by tying payments to physicians or practices to their performance on quality-of-care indicators. As noted above, the link between improvement on such indicators and cost reductions is unproven and in some cases is likely to increase net costs, due to false positives or aggressive treatment of problems unlikely to be real health threats.<sup>23</sup> Thus, while it will be important to ensure that quality of care does not decline in the pursuit of efficiency, improvement in quality indicators alone would not increase a physician's compensation under this approach.

### **What specific opportunities should be pursued?**

Generating savings by reducing the need for hospitalizations for beneficiaries with chronic illnesses and reducing hospital readmissions requires the enactment of policies that build on the hard, scientific evidence about what works for these beneficiaries, who account for a significant amount of total Medicare spending. The challenge will be in disseminating these interventions more broadly and making sure that they are defined thoroughly so that they can be replicated faithfully and paid for in a manner that generates net savings to Medicare, while improving patient outcomes. This in turn will require creative use of incentives. Realizing the unproven

but vast potential for savings through reducing differences between physicians in service use patterns requires improving information collection and dissemination and creating the proper financing incentives for all physicians and hospitals.

Four conditions should be kept in mind when setting these policies:

- **First**, improvement in quality of care (as measured by quality of life, patient satisfaction, processes of care, or even clinical indicators) does not necessarily result in lower health care costs. Unless these changes are accompanied by a reduction in the cost of care (through more efficient use of healthcare resources, less redundancy, or most importantly, less need for hospitalizations), paying more for such improvements in quality may make patients happier but will increase overall costs. To cover the cost of interventions and generate the kind of real net savings needed, policies need to be focused on changes that improve quality of care in ways that will reduce the need for expensive hospital, post-acute care, and specialist care.
- **Second**, most programs will take time to show cost savings. Promoting policy changes that are based on rigorous evidence and providing extensive detail on how such interventions were effectively implemented can greatly shorten that time, but as new entities adopt these practices, it will take time for them to learn how to adapt interventions to their settings.
- **Third**, multifaceted approaches are needed to: (1) enable and drive providers of all types in all types of organizations to change their behavior in ways that improve the efficiency of health care, and (2) enable and impel patients to change their self-care practices and behaviors in ways that are likely to reduce their need for expensive health care.
- **Fourth**, rather than proceeding to do something quickly that is untested on a national basis, new policies should be tested with rigorous methodologies from the start to monitor whether they are working, where they are working best, and why, so policymakers can be assured that they have made sound choices or can learn from past mistakes and move quickly in a more productive direction.

With these conditions in mind, the following specific policy changes or initiatives seem to offer the most promise for generating real net savings for Medicare in the next three to five years:

### ***Reducing Hospitalizations and Hospital Readmissions for Beneficiaries with Chronic Illnesses***

- Implement a large, broad-based coordinated care pilot to test whether other organizations can achieve the same success as the best-practice interventions that generated significant reductions in hospitalizations in four demonstration program sites for a specific high-risk population (beneficiaries with one or more of three major chronic illnesses—coronary artery disease, congestive heart failure, or chronic obstructive pulmonary disease—and a hospitalization in the past year, plus beneficiaries with any of 12 chronic illnesses and two or more hospitalizations in the past two years). The new pilot sites would focus on only this target population and would be required to implement the protocol developed by the effective sites, to maximize the likelihood that their interventions are faithful to the

proven interventions. The findings from the pilot would then guide the establishment of a permanent care coordination benefit under Medicare that has been proven to generate net savings and to be replicable in various settings.

- Concurrent with this pilot, maintain an ongoing “learning laboratory” of care coordination programs to conduct rapid turnaround testing of variations in the proven interventions. These variations could be implemented and tested far more quickly than the normal demonstration process allows and could provide valuable guidance to organizations of all types on ways to increase the impacts on hospitalizations and lower the cost of the effective care coordination interventions, both of which would increase net savings to Medicare.
- Modify the Medicare medical home demonstration so that it is targeted to only the subset of beneficiaries who are most likely to benefit from care coordination—that is, the high-risk population identified in the care coordination demonstrations—and require that medical homes incorporate the lessons learned from the demonstrations about how to implement an effective care coordination intervention. Set the payment rates to medical homes for this population at a level that is expected to generate net savings. Current estimates suggest that a rate of \$145 per beneficiary per month for this high-risk group could generate net savings to CMS, if the medical homes are as effective as the four best care coordination demonstration programs.
- Vary the base rate paid to hospitals for Medicare admissions to reward those with low readmission rates and penalize those with high readmission rates (properly adjusting for case mix). Provide guidance to hospitals on how to achieve lower readmission rates, through feeding back data analyses to diagnose the major sources of the high rates as well as referring the hospitals to experts who have developed and tested effective transitional care interventions.

### ***Reducing Regional Disparities Across Physicians and Areas in Efficiency and Quality***

- Refine and extend the Resource Use Reporting program to all Medicare physicians nationally. Under this program, physicians will be made aware of how their patients’ Medicare costs and practice patterns differ from those of their peers locally, statewide, and nationally. Provide quality of care indicators, such as complications, readmissions, deaths, preventable hospitalizations, and other quality indicators that have clear and near-term cost implications. Publicize the aggregate findings annually to show differences in levels and trends across major metropolitan areas and states, for urban versus rural areas, and for the country as a whole. Develop and publicize plans to base payments to physicians on their efficiency and quality measures.

### ***Reinstating Incentives for Efficient Provision of Care in the Medicare Advantage (MA) Program***

- The structure and incentives for efficient provision of care already exists in the Medicare Advantage program. A recent paper by Anderson suggests that MA plans provide far more cost-effective care than traditional fee-for-service (FFS) Medicare.<sup>24</sup> Furthermore, some Special Needs Plans are focused specifically on beneficiaries with chronic illnesses. However, MA only generates savings for the federal government if it can provide care more cheaply than FFS Medicare through greater efficiency and cost control.

Furthermore, Medicare's previous attempts to save money by paying 95 percent of expected FFS rates actually resulted in losses, because the risk adjusters did not adequately account for the favorable selection experienced by HMOs. The current risk adjuster is much more refined and does account for favorable selection on chronic conditions. However, the Medicare Payment Advisory Commission (MedPAC) estimates that CMS currently pays MA plans about \$12 billion (14 percent) more per year than what it would cost to serve these beneficiaries in FFS, as a result of setting base rates far above fee-for-service levels. MedPAC therefore recommends saving this full amount by setting rates at 100 percent of expected FFS costs. Paying 98 percent of expected FFS costs could generate additional savings to CMS of \$1.7 billion per year at 2009 MA enrollment levels, thus returning the MA program to its conceptual origins as a strategy to promote better and more efficiently managed care. (H.R. 3200 would phase down payments to 100 percent of expected FFS expenditures to achieve savings of \$156 billion over ten years, consistent with the MedPAC recommendation).

Saving health care dollars through these approaches means some health care providers and insurers will lose money. Being upfront about this fact may facilitate an open discussion of the costs and benefits of these reforms. For some of the suggested policy changes, such as reducing per capita payments to Medicare Advantage plans to expected fee-for-service expenditures (or less), it may be obvious who loses. However, it should also be acknowledged that reducing disparities among providers means that physicians who practice a more resource-intensive style of care will make less money, just as tying base payment amounts to hospitals to their readmission rates means hospitals with high readmissions will lose money. Adding care coordination as a Medicare benefit would yield savings by reducing hospital use and revenue, as well as the post-acute care that follows many hospital admissions. A clear explanation of where savings are coming from will lend credibility to the estimates and could generate greater public support for the changes.

In addition to these policies with short-run savings potential, the groundwork should be laid for more sweeping changes that have the potential to improve the efficiency and quality of health care over the longer term. The approaches with the greatest potential include:

- Reduce the enormous differences in efficiency across providers between and within geographic areas by tying payments to physicians to their RUR ratings and quality of care, rewarding those who provide care most efficiently while providing care of average or better quality, and penalizing those associated with the least efficient care or poor quality. Some learning period will be needed before fully implementing this major payment reform.
- Implement a national Medicare care coordination benefit that builds on the findings from the demonstration. Such a benefit could reduce hospitalizations by 12 percent each year among this high-risk population and generate annual net savings of \$2.8 billion, even if no additional savings are achieved from learning that has occurred throughout the demonstration or from ongoing efforts to provide detailed protocols to facilitate replication of the most effective interventions.<sup>25</sup> A range of methods of financing such a benefit should be considered. While putting participating organizations at risk for their fees if they do not generate savings sounds appealing, many academic medical centers and other non-profit delivery systems have organizational constraints that prohibit them

from entering into risk-bearing agreements. However, evidence to date from several CMS demonstrations suggests that such organizations are far more likely to be able to generate savings than the large commercial disease management providers. Thus, work must be done on the types of organizations that would be authorized to receive compensation for providing care coordination, and how that compensation would be structured. A conservative approach would be to require that any organization wishing to be a certified Medicare coordinated care provider go through a two-year pilot phase in which they must prove they are able to generate savings using the approved model.

- Continue to move forward with electronic health records development. Some of the most crucial aspects are having a common platform that ensures that providers with different systems would be able to input, output, and share EHRs easily, having a summary format that displays the most salient information to providers in a very user-friendly and expedient fashion, and linking EHR information to best practice guidelines to generate queries and suggestions for providers to consider.
- Conduct rigorous studies wherever possible to compare the relative effectiveness of alternative interventions that vary substantially in their costs. Use large enough samples where possible to examine subgroups of patients in order to assess variations in what works best for different types of individuals. Perform the studies in multiple settings and places to ensure generalizability, observe the variations in impacts, and determine the barriers that some areas or organizations face to successful implementation of the intervention.
- Continue to seek ways to improve end-of-life care to maximize the comfort and quality of life in the last months of life for terminally ill patients and their families while limiting the use of expensive procedures and treatments that have no potential to meaningfully increase survival time. Conduct a study similar to the RUR program to calculate, compare, and feed back information to physicians and hospitals on the end-of-life experiences of their patients relative to those of other providers in the community, state, and nation.

The suggestions above, like any others, do not guarantee that the Medicare spending growth rate will fall to sustainable levels in the near term. However, they *are* based on what the hard evidence to date suggests are the options most likely to succeed at generating Medicare savings, beyond simple across-the-board reductions in provider payment rates; they are not based on wishful thinking or purely theoretical models. Implementing the above changes should help get Medicare moving toward savings by reducing costs for the highest-risk beneficiaries, by reducing hospital readmissions, and by beginning to reduce geographic disparities between physicians in spending and care delivery, while developing a health care delivery system that leads to lower future costs and improved quality of care.

## APPENDIX A

### Evaluating Savings from the Community Care of North Carolina (CCNC) Program

The methodology in the analysis to evaluate savings from implementing the CCNC program in North Carolina's Medicaid program, conducted by Mercer, consists of comparing actual costs under CCNC for 2004-2006 to benchmarks based on estimates of what costs would have been under fee for service. The benchmarks were created by projecting trends in cost per participant per month by type of service from the 2000-2002 period forward to the 2004-2006 period, then multiplying by the number of CCNC participants in 2004, 2005, and 2006 to get the benchmark by type of service for each year. The benchmark rates were adjusted for programmatic changes in 2006, such as the inclusion of newly eligible populations, the impact of the Medicare Part D prescription drug benefit, and a change in reimbursement for disproportionate share hospital (DSH) payments. Actual cost data were adjusted for pharmacy rebates, third-party liability recoveries, cost settlements and fraud and abuse recoveries. The methodology for calculating the trend rates, the trend rate actually used, and the effects of the various adjustments and how they were made were not described, yet each may have critical implications for the size and credibility of the estimates.

The findings from Mercer's evaluation of CCNC also raise some concerns about the plausibility and generalizability of the savings estimates. For example, 70 percent of the savings in 2005 (\$158 million) were for inpatient costs, which were cut almost in half, according to the estimates. This rate of "savings" on hospital costs far exceeds any rigorous estimate for any other intervention ever tested on a large population. Furthermore, when the results were broken down by age group, over half of the savings were for infants age one year or less, again due to a greater than 50 percent reduction in per member per month (pmpm) cost, although how such huge effects were obtained is not explained. Even if this were a credible estimate, it is unclear if such savings could be replicated in a Medicare population.

A second set of estimates provided by Mercer raises even more suspicions about the plausibility of these estimates. When the benchmark is constructed solely from the state's managed care sector in 2000-2002, the estimated savings are: (1) about one-third the size of savings based on the comparison to the fee-for-service sector, (2) due primarily to outpatient and physician services rather than hospitalizations, and (3) distributed across various age groups rather than being concentrated in infants. While the magnitude of these alternative Mercer estimates are more credible than the primary estimates, they suffer from the same lack of clear exposition of the methodology, and are inherently heavily dependent on a wide range of undocumented assumptions that have not been subjected to tests of robustness.

The very low cost cited for the CCNC program, given the difficulty of actually improving the coordination of care or treatment of chronic illnesses, raises questions about the plausibility of these savings estimates, and the replicability of the results in other locations.

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<sup>24</sup> Gerard Anderson, “The Benefits of Care Coordination: A Comparison of Medicare Fee-for-Service and Medicare Advantage,” Report prepared for the Alliance of Community Health Plans, September 1, 2009.

<sup>25</sup> Peikes, Peterson, and Brown, 2009 (op cit) find that the four successful programs in the Coordinated Care demonstration reduced hospitalizations by 0.156 hospitalizations per beneficiary per year in the pooled sample for the high-risk subpopulation defined earlier in this paper, over a follow-up period averaging three years. At an average cost of \$11,000 per hospitalization for this group, this would yield gross savings of \$,1716 per person per year in 2005 dollars, or about \$2,190 per year in 2010 dollars. Directors of the four programs agree that a fee of \$145 per participant per month (\$1,740 per year) would cover the costs of the program, leading to net savings of \$450 per beneficiary per year. Given that 18.3 percent of the Medicare population meet the high-risk criteria, and there are currently 34.6 million Medicare beneficiaries in FFS, enrolling all of them in a coordinated care program like the successful ones from the demonstration would yield net savings to Medicare of approximately \$2.8 billion per year in 2010 dollars.



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